



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

B&D Dairy Farm LLC

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a livestock operation
located at

Main Farm - W7251 E. 6th Rd., Pound, WI 54161. Sec 36 T31N R20E.

Heifer Facility - W7276 E. 6th Rd., Pound, WI 54161. Sec 25 T31N R20E.

Little River Satellite WSF - 7651 Hillcrest Road, Oconto, WI 54153. Sec 34 T29N R21E.

to Groundwater and Surface Waters of the Little Peshtigo River, Lower Peshtigo River, Little River, and Middle
Peshtigo River and Thunder River Watersheds, Lake Michigan Basin

in accordance with the effluent limitations, monitoring requirements and other conditions on the management and
utilization of manure and process wastewater set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after
this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis.
Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Ben Uvaas
CAFO Compliance & Enforcement Coordinator

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - July 01, 2019
PERMIT MODIFICATION DATE: December 1, 2019

EXPIRATION DATE – June 30, 2024

TABLE OF CONTENTS

1 LIVESTOCK OPERATIONAL AND SAMPLING REQUIREMENTS	1
1.1 PRODUCTION AREA DISCHARGE LIMITATIONS	1
1.2 RUNOFF CONTROL	1
1.2.1 <i>Non-permanent feed storage areas</i>	1
1.3 MANURE AND PROCESS WASTEWATER STORAGE	2
1.3.1 <i>Proper Operation and Maintenance</i>	2
1.3.2 <i>Discharge Prevention</i>	3
1.3.3 <i>Liquid Manure – 180-day storage</i>	3
1.3.4 <i>Facility Closure and Abandonment</i>	3
1.4 SOLID MANURE STACKING	3
1.5 ANCILLARY SERVICE AND STORAGE AREAS	4
1.6 NUTRIENT MANAGEMENT	4
1.6.1 <i>General Spreading Restrictions</i>	5
1.6.2 <i>Non-Cropland Applications</i>	5
1.6.3 <i>Silurian Bedrock</i>	5
1.6.4 <i>Additional Nutrient Management Plan Requirements</i>	5
1.6.5 <i>Frozen or Snow Covered Ground – General Spreading Restrictions</i>	6
1.6.6 <i>Frozen or Snow Covered Ground – Solid Manure (12% solids or more)</i>	6
1.6.7 <i>Frozen or Snow Covered Ground – Allowances for Surface Applications of Liquid Manure (<12% solids)</i>	7
1.6.8 <i>Frozen or Snow Covered Ground – Process Wastewater</i>	8
1.6.9 <i>Spreading Sites Submittals</i>	8
1.7 MONITORING AND SAMPLING REQUIREMENTS	9
1.7.1 <i>Monitoring and Inspection Program</i>	9
1.7.2 <i>Sampling Requirements</i>	9
1.8 SAMPLING POINT(S)	10
1.8.1 <i>Manure and Process Wastewater Storage Facilities - Sampling Required</i>	10
1.8.2 <i>Runoff Control System(s) - No Sampling Required</i>	12
1.8.3 <i>Sampling Point 001 - WSF 1; 002- WSF 2; 009- WSF 3, and 019- Little River Satellite WSF</i>	13
1.8.4 <i>Sampling Point 003 - Misc. Solid Manure; 014- Solids from Liquid WSFs; 015- Headland Stacking Solid Manure, and 018- Solid Manure Stacking Area</i>	15
2 GROUNDWATER REQUIREMENTS	18
2.1 MONITORING REQUIREMENTS AND LIMITATIONS	18
3 SCHEDULES	20
3.1 EMERGENCY RESPONSE PLAN	20
3.2 MONITORING & INSPECTION PROGRAM	20
3.3 ANNUAL REPORTS	20
3.4 NUTRIENT MANAGEMENT PLAN	20
3.5 GROUNDWATER MONITORING SYSTEM - PLAN	21
3.6 GROUNDWATER MONITORING SYSTEM - REPORTING	21
3.7 FEED STORAGE RUNOFF CONTROLS - ENGINEERING EVALUATION	22
3.8 RUNOFF CONTROL SYSTEM - ENGINEERING EVALUATION	22
3.9 MANURE STORAGE FACILITY - ENGINEERING EVALUATION 1	22
3.10 MANURE STORAGE FACILITY - ENGINEERING EVALUATION 2	23
3.11 SUBMIT PERMIT REISSUANCE APPLICATION	23
4 STANDARD REQUIREMENTS	24
4.1 GENERAL CONDITIONS	24
4.1.1 <i>Duty to comply</i>	24
4.1.2 <i>Permit Actions</i>	24
4.1.3 <i>Property Rights</i>	24
4.1.4 <i>Schedules</i>	24

4.1.5 Inspection and Entry	24
4.1.6 Transfers	24
4.1.7 Duty to Mitigate	25
4.1.8 Duty to Provide Information	25
4.1.9 Recording of Results-Sampling	25
4.1.10 Recording of Results-Inspections	25
4.1.11 Spill Reporting	25
4.1.12 Planned Changes	25
4.1.13 Submittal of Plans and Specifications	26
4.1.14 Other Information	26
4.1.15 Reporting Requirements – Alterations or Additions	26
4.1.16 Noncompliance - 24 Hour Reporting	26
4.1.17 Reports and Submittal Certification	26
4.2 LIVESTOCK OPERATION GENERAL REQUIREMENTS	27
4.2.1 Responsibility for Manure and Process Wastewater	27
4.2.2 Distribution of Manure and Process Wastewater	27
4.2.3 Emergency Response Plans	27
4.2.4 Mortality Management	27
4.2.5 Department Review of Nutrient Management Plans	28
4.2.6 Existing Manure Storage Facilities Evaluation	28
4.2.7 Existing Runoff Control System(s) Evaluation	28
4.2.8 Existing Composting Storage Facilities and Leachate Containment Evaluation	28
4.2.9 Manure Storage Facility, Composting and Compost Leachate Containment Systems - Installation Plan Requirements	29
4.2.10 Runoff Control Systems - Installation Plan Requirements	29
4.2.11 Record Keeping and Retention	30
4.2.12 Reporting Requirements	30
4.2.13 Duty to Maintain Permit Coverage	30
4.3 GROUNDWATER STANDARD REQUIREMENTS	30
4.3.1 Application of NR 140 to Substances Discharged	30
4.3.2 Groundwater Sampling	30
4.3.3 Indicator Parameter - Preventive Action Limits	31
4.3.4 Groundwater Monitoring Forms	31
4.3.5 Appropriate Formulas for Groundwater	31
4.3.6 Reporting Depth to Groundwater	31
4.3.7 Groundwater Elevation	31
4.3.8 Groundwater Grab Samples	31
4.3.9 Filtering of Groundwater Samples	31
4.3.10 Groundwater Data Log	31
4.3.11 Notification of Attaining or Exceeding Groundwater Quality Standards	32
4.3.12 Preventive Action Limit (PAL) Exceedance	32
4.3.13 Enforcement Standard Exceedance Within the Design Management Zone	32
4.3.14 Enforcement Standard Exceedance Outside the Design Management Zone	32
5 SUMMARY OF REPORTS DUE	33

1 Livestock Operational and Sampling Requirements

1.1 Production Area Discharge Limitations

The permittee shall comply with the livestock performance standards and prohibitions in ch. NR 151. In accordance with s. NR 243.13, the permittee may not discharge manure or process wastewater pollutants to navigable waters from the production area, including approved manure stacking sites, unless all of the following apply:

- Precipitation causes an overflow of manure or process wastewater from a containment or storage structure.
- The containment or storage structure is properly designed, constructed and maintained to contain all manure and process wastewater from the operation, including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event for this location as specified in s. NR 243.04.
- The production area is operated in accordance with the inspection, maintenance and record keeping requirements in s. NR 243.19.
- The discharge complies with surface water quality standards.

A permittee may not discharge any pollutants from the production area to a 303(d) listed surface water if the pollutants discharged are related to the cause of the impairment, unless the discharge is allowed under an EPA approved TMDL.

For all new or increased discharges to an ORW or ERW, any pollutant discharged shall not exceed existing levels of the pollutant immediately upstream of the discharge site.

All structures shall be designed and operated in accordance with ss. NR 243.15 and NR 243.17 to control manure and process wastewater for the purpose of complying with discharge limitations established above and groundwater standards.

The permittee may not discharge pollutants to navigable waters under any circumstance or storm event from areas of the production area, including manure stacks on cropland, where manure or process wastewater is not properly stored or contained by a structure.

NOTE: Wastewater treatment strips, grassed waterways or buffers are examples of facilities or systems that by themselves do not constitute a structure.

Production area discharges to waters of the state authorized under this permit shall comply with water quality standards, groundwater standards and may not impair wetland functional values.

1.2 Runoff Control

All runoff control systems shall be designed and maintained to comply with production area discharge limitations. Uncontaminated runoff shall be diverted away from manure and process wastewater storage and containment areas, raw materials storage and containment areas, and outdoor animal lots. All storage and containment structures associated with runoff control systems shall be operated in accordance with the “Proper Operations and Maintenance” section.

1.2.1 Non-permanent feed storage areas

All proposed non-permanent feed storage (e.g., silage bags) areas shall be submitted to the Department for approval. A permittee may not use non-permanent feed storage areas unless the permittee has obtained Department approval. Upon approval from the Department, the permittee shall comply with the following requirements, Production Area Discharge Limitations, and the table below when siting and operating non-permanent feed storage areas:

- Feed with over 75% moisture is not allowed on non-permanent areas.
- Stored feed may not be placed on bare ground and must be covered to prevent infiltration of precipitation. Significantly degraded or damaged covers shall be repaired or replaced.
- Stored feed must be moved annually to an area where feed wasn’t stored within the previous 12 months.
- The area where feed was stored must be re-vegetated after the feed is moved.

- Clean water shall be diverted away from the area where the feed is stored.
- Spilled feed shall be removed and all working faces shall be recovered to minimize potential spillage and exposure to precipitation.

Siting Criteria	Restriction
1. Hydrologic Soil Groups	B, C, D
2. Subsurface Separation Distance <ul style="list-style-type: none">- Saturation- Bedrock	$\geq 3'$ $\geq 3'$
3. Surface Separation Distance <ul style="list-style-type: none">- Wells- Lakes- Sinkholes, or other Karst Features- Quarries- Streams- Wetlands and Surface Inlets- Open channel flow- Land Slope- Floodplain (100 yr)	$\geq 250'$ $\geq 1,000'$ $\geq 1,000'$ $\geq 1,000'$ $\geq 300'$ $\geq 300'$ $\geq 100'$ $\leq 6\%$ $\geq 100'$

As part of the Department approval, the Department may require additional restrictions on non-permanent feed storage areas needed to protect water quality. The permittee shall manage the storage areas in compliance with the additional restrictions specified in the approval.

Storage area approvals may be rescinded by the Department based on documented impacts to waters of the state at or from the storage area, the presence of significant amounts of runoff or ponded runoff contaminated with leachate or stored feed or the permittee's failure to comply with siting and operational requirements.

NOTE: Ch. NR 429.04, Wis. Adm. Code, prohibits the burning of covers used for feed storage.

1.3 Manure and Process Wastewater Storage

All permittees shall have and maintain adequate storage for all manure and process wastewater generated at the operation to ensure that wastes can be properly stored and land applied in compliance with the conditions and timing restrictions of the permit, a Department approved nutrient management plan and s. NR 243.14(9).

1.3.1 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all manure and process wastewater facilities and systems in compliance with the conditions of this permit. The permittee shall comply with the permit and s. NR 243.17, including the following requirements:

- All liquid manure and process wastewater storage or containment facilities shall have the permanent markers specified in s. NR 243.15(3)(e) (margin of safety and maximum operating level for liquid manure and process wastewater storage and the 180-day storage marker for liquid manure storage).
- Chemicals and other pollutants may not be added to manure, process wastewater or stormwater storage facilities or treatment systems without prior Department approval.
- Liquid manure storage facilities or systems shall be emptied to the point that the 180-day level indicator is visible on at least one day between October 1 and November 30, except for liquid manure remaining due to unusual fall weather conditions prohibiting manure applications during this time period. The permittee shall record the day on which the 180-day level indicator was visible during this time period. Permittees unable to empty their storage facility to the 180-day level indicator between October 1 and November 30, shall notify the department in writing by December 5.

- The permittee shall maintain a design storage capacity of 180 days for liquid manure unless the Department approves a temporary reduction in design storage capacity to 150 days in accordance with s. NR 243.17(4).
- Prior to introducing any influent additives to a digester, other than manure, the permittee shall obtain written Department approval. If any materials other than manure are used in the digester, the permittee shall maintain daily records of the volumes of all manure and non-manure components added to the digester influent. As part of its approval, the Department may apply additional requirements in accordance with s. NR 243.17(1). As part of the Department's review, the Department may also require amendments to the permittee's nutrient management plan and the permittee shall submit an amended plan to the Department to incorporate the additional requirements.

1.3.2 Discharge Prevention

A permittee shall operate and maintain storage and containment facilities to prevent overflows and discharges to waters of the state.

- The permittee may not exceed the maximum operating level in liquid storage or containment facilities except as a result of recent precipitation or conditions that do not allow removal of material from the facility in accordance with permit conditions.
- The permittee shall maintain a margin of safety in liquid storage or containment facilities that levels of manure, process wastewater and other wastes placed in the storage or containment facility may not exceed. Materials shall be removed from the facility in accordance with the approved nutrient management plan to ensure that the margin of safety is not exceeded. Failure to maintain a margin of safety is permit noncompliance that must be reported to the Department in accordance with the timeframes specified in the Noncompliance-24 Hour Reporting subsection in the Standard Requirements.

1.3.3 Liquid Manure – 180-day storage

The permittee shall demonstrate compliance with the 180-day design storage capacity requirement at all the following times:

- As part of an application for permit reissuance.
- At the time of submittal of plans and specifications for proposed reviewable facilities or systems.
- In annual reports to the department.
- When an operation is proposing, at any time, a 20% expansion in animal units or an increase by an amount of 1,000 animal units or more unless the Department has approved reductions in design storage in accordance with s. NR 243.17(4).

1.3.4 Facility Closure and Abandonment

In accordance with s. NR 243.17, if the permittee plans to close or abandon structures or systems regulated by this permit, a closure or abandonment plan shall be submitted to the Department and written Department approval must be granted before closing the facility. Manure storage facilities shall be closed or abandoned in accordance with NRCS Standard 360 (December 2002). Closure or abandonment of a manure storage facility shall occur when manure has not been added or removed for a period of 24 months, unless the owner or operator can provide information to the Department that the structure is designed to store manure for a longer period of time or that the storage structure will be utilized within a specific period of time.

1.4 Solid Manure Stacking

All proposed stacking of solid manure outside of a Department approved storage facility shall be submitted to the department for approval and identified in the permittee's nutrient management plan. A permittee may not stack manure on a site unless the permittee has obtained Department approval to stack. Stacking practices shall comply with requirements of s. NR 243.141. Stacking approvals may be rescinded by the Department based on documented impacts to waters of the state at or from the stacking site or runoff onto another persons land. Stacking shall comply with following requirements:

- When piled in a stack, the solid manure stack must be able to maintain its shape with minimal sloughing such that an angle of repose of 45 degrees or greater is maintained when the manure is not frozen.

- Stacking of solid manure outside of a department approved manure storage facility shall, at a minimum, meet the specifications in NRCS Standard 313, Table 9, dated December 2005. Alternatively, stacks may be placed on sites with soils in the hydrologic soil group D provided the manure has a solids content of greater than 32% and all other criteria in NRCS Standard 313, Table 9, are met.
- The permittee shall implement any necessary additional best management practices to ensure stacking areas maintain compliance with the production area requirements in s. NR 243.13. Best management practices may include upslope clean water diversions or downslope containment structures.
- The stacked manure shall have minimal leaching so that leachate from the stack is contained within the designated stacking area and does not cause an exceedance of groundwater quality standards.
- Solid manure may not be stacked in a water quality management area.
- Stacks may only be placed on cropland.

As part of the Department approval, the Department may require additional restrictions on stacking of solid manure needed to protect water quality. The permittee shall manage the stack in compliance with the additional restrictions specified in the approval.

1.5 Ancillary Service and Storage Areas

The permittee may discharge contaminated storm water to waters of the state from ancillary service and storage areas provided the discharges of contaminated storm water comply with groundwater and surface water quality standards. The permittee shall take preventive maintenance actions and conduct periodic visual inspections to minimize the discharge of pollutants from these areas to surface waters. For CAFO outdoor vegetated areas, the permittee shall also implement the following practices:

- Manage stocking densities, implement management systems and manage feed sources to ensure that sufficient vegetative cover is maintained over the entire area at all times.
- Prohibit direct access of livestock or poultry to surface waters or wetlands located in or adjacent to the area unless approved by the Department.

1.6 Nutrient Management

Except as provided for in s. NR 243.142(2), the permittee is responsible for ensuring that the manure and process wastewater generated by the operation is land applied or disposed of in a manner that complies with the terms of this permit, the approved nutrient management plan and s. NR 243.14.

The permittee shall land apply manure and process wastewater in compliance with the Department approved nutrient management plan, s. NR 243.14 and the terms and conditions of this permit. Land application practices shall not exceed crop nutrient budgets determined in accordance with NRCS Standard 590, this permit and s. NR 243.14 and shall be based on manure and process wastewater analyses, soil tests, as well as other nutrient sources applied to a field. The permittee shall review and amend the nutrient management plan on an annual basis to reflect any changes in operations over the previous year (including incorporation of the previous year's amendments and new soil test results) and to include projected changes for the upcoming year. Annual updates are due in accordance with the Schedules section of the permit.

The management plan may be amended at any time provided the proposed amendments are approved in writing by the Department and meet the requirements of s. NR 243.14. Changes requiring a plan amendment include, but are not limited to, changes to application rates, new spreading sites, changes in the number of livestock, changes in manure storage procedures, or changes in the type of manure spreading equipment. Unless specified in the "Special Permit Conditions" section of the permit, an amendment does not become effective and may not be implemented until the Department has reviewed and approved the amendment. In addition, all approved amendments in a given year shall be included in the Annual Update.

The permittee shall maintain daily spreading records and submit annual reports relating to land application activities in accordance with s. NR 243.19.

1.6.1 General Spreading Restrictions

The permittee shall land apply manure and process wastewater in compliance with the following:

- Manure or process wastewater may not pond on the application site.
- During dry weather conditions, manure or process wastewater may not run off the application site, nor discharge to waters of the state through subsurface drains.
- Manure or process wastewater may not cause the fecal contamination of water in a well.
- Manure or process wastewater may not run off the application site nor discharge to waters of the state through subsurface drains due to precipitation or snowmelt except if the permittee has complied with all land application restrictions in NR 243 and this permit, and the runoff or discharge occurs as a result of a rain event that is equal to or greater than a 25-year, 24-hour rain event.
- Manure or process wastewater may not be applied to saturated soils.
- Land application practices shall maximize the use of available nutrients for crop production, prevent delivery of manure and process wastewater to waters of the state, and minimize the loss of nutrients and other contaminants to waters of the state to prevent exceedances of groundwater and surface water quality standards and to prevent impairment of wetland functional values. Practices shall retain land applied manure and process wastewater on the soil where they are applied with minimal movement.
- Manure or process wastewater may not be applied on areas of a field with a depth to groundwater or bedrock of less than 24 inches.
- Manure or process wastewater may not be applied within 100 feet of a direct conduit to groundwater.
- Manure or process wastewater may not be applied within 100 feet of a private well or non-community system as defined in ch. NR 812 or within 1000 feet of a community well as defined in ch. NR 811.
- Unless specified otherwise in this permit, where incorporation of land applied manure is required, the incorporation shall occur within 48 hours of application.
- Manure or process wastewater may not be surface applied when precipitation capable of producing runoff is forecast within 24 hours of the time of planned application.
- Manure or process wastewater may not be spread on surface waters, established concentrated flow channels, or non-harvested vegetative buffers.
- Fields receiving manure and process wastewater may not exceed tolerable soil loss ("T").

1.6.2 Non-Cropland Applications

Manure may be applied to non-cropland if pre-approval in writing is issued by the Department. Considerations for approval may include acceptable application timing, amounts and methods.

1.6.3 Silurian Bedrock

Mechanical applications of manure to cropland or pasture areas that meet the definition of Silurian bedrock under s. NR 151.015(17) shall comply with s. NR 151.075.

NOTE: This requirement applies only to applications of manure on Silurian bedrock which are areas where the bedrock consists of Silurian dolomite with a depth to bedrock of 20 feet or less. These areas comprise portions of the following counties; Brown, Calumet, Dodge, Door, Fond du Lac, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington and Waukesha.

1.6.4 Additional Nutrient Management Plan Requirements

- If applicable, the permittee shall specify the method(s) of incorporation in its nutrient management plan.
- The permittee shall identify, to the maximum extent practicable, the presence of subsurface drainage systems in fields where its manure or process wastewater is applied as part of the nutrient management plan.
- In accordance with s. NR 243.14(3), the permittee shall account for 1st and 2nd year nutrient credits.

- On a field-by-field basis, the permittee shall select and implement one of the practices listed in s. NR 243.14(4) for manure and process wastewater applications in a SWQMA (defined in ch. NR 243), and include the selected practices in the nutrient management plan. Whenever manure or process wastewater is applied within a SWQMA, the permittee shall apply the material in compliance with the SWQMA practices specified in the approved nutrient management plan.
- On a field-by-field basis, the permittee shall select one of the methods specified in s. NR 243.14(5) for assessing and minimizing the potential delivery of phosphorus to surface waters, and include the selected method in the nutrient management plan. The permittee shall apply manure and process wastewater to fields in compliance with the phosphorus methods specified in the approved nutrient management plan. On a field-by-field basis, the permittee shall select and implement one of the methods.

1.6.5 Frozen or Snow Covered Ground – General Spreading Restrictions

If the permittee applies manure on frozen or snow-covered ground, the permittee shall land apply the manure in compliance with all of the restrictions in s. NR 243.14(6)-(8). Some of these restrictions include:

- Any incorporation of manure on frozen or snow-covered ground must be done immediately after application.
- The permittee shall identify acceptable sites for allowable applications on frozen or snow-covered ground as part of its nutrient management plan.
- The permittee shall evaluate each field at the time of application to determine if conditions are suitable for applying manure and complying with the requirements of this permit. All surface applications of manure or process wastewater on frozen or snow-covered ground shall occur on those fields that represent the lowest risk of pollutant delivery to waters of the state and where the application results in a winter acute loss index value of 4 or less using the Wisconsin phosphorus index.
- Manure or process wastewater may not be land applied on fields when snow is actively melting such that water is flowing off the field.
- On fields with soils that are 60 inches thick or less over fractured bedrock, manure may not be applied on frozen ground or where snow is present.
- Manure may not be incorporated on areas of fields with greater than 4 inches of snow.

[NOTE: Please refer to ch. NR 243 for all requirements contained in s. NR 243.14(6)-(8).]

1.6.6 Frozen or Snow Covered Ground – Solid Manure (12% solids or more)

The permittee may surface apply solid manure on frozen or snow-covered ground in compliance with the following restrictions:

- Solid manure may not be surface applied on slopes greater than 9%.
- Solid manure may not be surface applied from February 1 through March 31 on areas of fields where an inch or more of snow is present or where the ground is frozen.
- The surface application shall comply with the restrictions in Table 1.

Table 1 Restrictions for Surface Applying Solid Manure on Frozen or Snow Covered Ground		
Criteria	Restrictions for fields with 0-6% slopes	Restrictions for fields with slopes > 6% and up to 9%
Required fall tillage practice prior to application	Chisel or moldboard plow, no-till or a department approved equivalent ^A	Chisel or moldboard plow, no-till or department approved equivalent ^A
Minimum % solids allowed	12%	> 20%

<p align="center">Table 1 Restrictions for Surface Applying Solid Manure on Frozen or Snow Covered Ground</p>		
Criteria	Restrictions for fields with 0-6% slopes	Restrictions for fields with slopes > 6% and up to 9%
Application rate (cumulative per acre)	Not to exceed 60 lbs. P ₂ O ₅ per winter season, the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less	Not to exceed 60 lbs. P ₂ O ₅ per winter season, the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less
Setbacks from surface waters	No application allowed within SWQMA	No application allowed within 2.0 x SWQMA
Setbacks from downslope areas of channelized flow, vegetated buffers, and wetlands	200 feet	400 feet
Setbacks from direct conduits to groundwater	300 feet	600 feet
<p>A – All tillage and farming practices shall be conducted in accordance with the following requirements; 0-2% slope = no contouring required, >2-6% slope = tillage and practices conducted along the general contour, >6% slope = tillage and farming practices conducted along the contour. The department may approve alternative tillage practices on a case-by-case basis in situations where conducting practices along the contour is not possible. Allowances for application on no-till fields only apply to fields where no-till practices have been in place for a minimum of 3 years.</p>		

1.6.7 Frozen or Snow Covered Ground – Allowances for Surface Applications of Liquid Manure (<12% solids)

The permittee is prohibited from surface applying liquid manure during February and March, and is prohibited from surface applying liquid manure on frozen or snow-covered ground except for the following conditions:

- The permittee may surface apply liquid manure on frozen or snow covered ground, including during February and March, on an emergency basis in accordance with Table 2 and s. NR 243.14(7)(d) on fields the Department has approved for emergency applications. The permittee must notify the department verbally prior to the emergency application. Unless the emergency application is necessitated by imminent impacts to the environment or human or animal health, the permittee may not apply manure to a field on an emergency basis until the department has verbally approved the application. The permittee shall submit a written description of the emergency application and the events leading to the emergency application to the department within 5 days of the emergency application.
- Liquid manure that is frozen and cannot be transferred to a manure storage facility may be surface applied on frozen or snow-covered ground, including during February and March, in accordance with the restrictions in Tables 2 and s. NR 243.14(7)(f). Surface applications of frozen liquid manure do not require prior department approval or notification provided application sites for frozen liquid manure are identified in the approved nutrient management plan. During February and March, the permittee shall notify the department if the permittee expects to surface apply frozen liquid manure more than 5 days in any one month.

<p>Table 2 Restrictions for Surface Applications of Liquid Manure on Frozen or Snow Covered Ground</p>		
Criteria	Restrictions for fields with 0-2% slopes	Restrictions for fields with >2-6% slopes
Required fall tillage practice prior to application	Chisel or moldboard plow or department approved equivalent ^A	Chisel or moldboard plow or department approved equivalent ^A
Application rate (cumulative per acre)	Maximum application volume of 7,000 gallons per acre per winter season, not to exceed 60 lbs. P ₂ O ₅ , the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied or other phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less	Maximum application volume of 3,500 gallons per acre per winter season, not to exceed 30 lbs. P ₂ O ₅ , the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or other phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less
Setbacks from surface waters	No application allowed within SWQMA	No application allowed within SWQMA
Setbacks from downslope areas of channelized flow, vegetated buffers, wetlands	200 feet	200 feet
Setbacks from direct conduits to groundwater	300 feet	300 feet
<p>^A – All tillage and farming practices shall be conducted along the contour in accordance with the following requirements; 0-2% slope = no contouring required, >2-6% slope = tillage and practices conducted along the general contour. The department may approve alternative tillage practices on a case-by-case basis in situations where conducting practices along the contour is not possible</p>		

1.6.8 Frozen or Snow Covered Ground – Process Wastewater

If a permittee land applies process wastewater on frozen or snow-covered ground, the permittee shall land apply the process wastewater in compliance with s. NR 214.17(2) through (6) and the other land application restrictions in this permit, except for the restrictions in the “Frozen or Snow Covered Ground – Solid Manure (12% solids or more)” and “Frozen or Snow Covered Ground – Allowances for Surface Applications of Liquid Manure (<12% solids)” sections of this permit.

1.6.9 Spreading Sites Submittals

Permittee requests to amend a nutrient management plan to include landspreading sites not found in an approved management plan shall include the following information:

- The location of the site on maps and aerial photographs, and soil survey maps.
- A unique site identification number
- Information used to verify the site meets locational requirements of the permit,
- A nutrient budget for the site consistent with permit requirements. This includes a completed worksheet outlining the process in determining appropriate spreading rates for each additional site, including a crop history identifying the previous season's crops and future cropping plans for each site and estimated nutrient uptake.

- A demonstration that the field(s) in question meets tolerable soil loss rate.
- Maps that show where land application is prohibited or restricted on a map or aerial photograph of the site.
- Soil samples if available for one-time applications. If the permittee wishes to use the site for subsequent applications, soil samples shall be submitted prior to additional landspreading.

1.7 Monitoring and Sampling Requirements

The permittee shall comply with the monitoring and sampling requirements specified below for the listed sampling point(s), and the following conditions.

1.7.1 Monitoring and Inspection Program

As specified in the Schedules section of this permit, the permittee shall submit a monitoring and inspection program designed to determine compliance with permit requirements. The program shall be consistent with the requirements of this section and shall identify the areas that the permittee will inspect, the person responsible for conducting the inspections and how inspections will be recorded and submitted to the department.

Visual inspections shall be completed by the permittee or designee in accordance with the following frequencies:

- Daily inspections for leakage of all water lines that potentially come into contact with pollutants or drain to storage or containment structures or runoff control systems, including drinking or cooling water lines.
- Weekly inspections to ensure proper operation of all storm water diversion devices and devices channeling contaminated runoff to storage or containment structures.
- Weekly inspections of liquid storage and containment structures. For liquid storage and containment facilities, the berms shall be inspected for leakage, seepage, erosion, cracks and corrosion, rodent damage, excessive vegetation and other signs of structural weakness. In addition, the level of material in all liquid storage and containment facilities shall be measured and recorded in feet or inches above or below the margin of safety level.
- Quarterly inspections of the production area, including outdoor animal pens, barnyards and raw material storage areas. CAFO outdoor vegetated areas shall be inspected quarterly.
- Periodic inspections and calibration of landspreading equipment to detect leaks and ensure accurate application rates for manure and process wastewater. An initial calibration of spreading equipment shall be followed by additional calibration after any equipment modification that may impact application of manure or process wastewater or after changes in product or manure or process wastewater consistency. Spreading equipment for both liquid and solid manure shall be inspected just prior to the hauling season, and equipment used for spreading liquids shall be inspected at least once per month during months when hauling occurs.
- Inspections of fields each time manure or process wastewater is surface applied on frozen or snow-covered ground to determine if applied materials have run off the application site. Inspections shall occur during and shortly after application.

The permittee shall take corrective actions as soon as practicable to address any equipment, structure or system malfunction, noncompliance, failure or other problem identified through monitoring or inspections. If the permittee fails to take corrective actions within 30 days of identifying a malfunction, noncompliance, failure or other problem, the permittee shall contact the Department immediately following the 30-day period and provide an explanation for its failure to take action.

1.7.2 Sampling Requirements

The permittee shall collect and analyze representative samples of land applied manure and process wastewater for the parameters outlined in the monitoring requirements for each sample point. The permittee shall also collect and analyze soils from fields used for manure or process wastewater applications at least once every four years. Sampling of manure, process wastewater and soils shall be done in accordance with s. NR 243.19(1)(c).

1.8 Sampling Point(s)

The permittee is authorized to use only the facilities identified below, in accordance with the conditions specified in this permit. The permittee may not install or use new facilities or structures or land apply manure or other process wastewaters from these facilities unless written Department approval is received. A new facility is any facility that is not specifically identified in this permit. If a new facility is approved in writing by the Department, the conditions in the corresponding 'New Facility' sampling point (e.g. Manure Storage Facilities, Runoff Control Systems) will apply.

1.8.1 Manure and Process Wastewater Storage Facilities - Sampling Required

In accordance with the Production Area Discharge Limitations subsection, manure and process wastewater storage facilities shall be operated and maintained to prevent discharges to navigable waters and to comply with surface water quality standards. In addition, manure and process wastewater storage facilities shall be operated and maintained to minimize leakage for the purpose of complying with groundwater standards. Unless specifically approved and designated by the Department as a sampling point, in-field unconfined storage of manure (manure stacking) is prohibited. The permittee is authorized to use facilities identified below, in accordance with the conditions specified in this permit.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, System Description (including capacity, legal location, and action needed as applicable), and Treatment Description
001	WSF 1 - Sample point 001 is for liquid waste storage facility 1 (WSF 1) located at the main farm. WSF 1 is a concrete storage located west of WSF 2 and north of WSF 3. The facility has a maximum operating level capacity of 4,351,958 gallons and was constructed in 2000. It accepts manure and process wastewater from the freestall barns that is transferred via vacuum truck. An engineering evaluation shall be submitted according to the schedules section of the permit.
002	WSF 2 - Sample point 002 is for liquid waste storage facility 2 (WSF 2) located at the main farm. WSF 2 is a concrete lined storage located east of WSF 1 and north of WSF 3. The facility has a maximum operating level capacity of 3,010,039 gallons and was built in 2006. It accepts manure and process wastewater from the freestall barns and collected runoff from the west calf hutch area (sample point 013).
003	Miscellaneous Solid Manure - Sample point 003 is for solid manure sources that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf hutch manure, maternity pen bedpack, heifer bedpack, steer manure, etc. Representative samples shall be taken for each manure source type.
009	WSF 3 - Sample point 009 is for liquid waste storage facility 3 (WSF 3) located at the main farm. WSF 3 is a concrete lined storage located south of WSF 1 and WSF 2. This facility has a maximum operating level capacity of 17,720,691 gallons and was built in 2011. It accepts manure from animal housing, feed leachate, and feed storage area runoff.
014	Solids from Liquid WSFs - Sample point 014 is for any settled manure solids removed from the bottom of liquid waste storage facilities. This includes manure-laden sand, manure fiber, etc. Representative samples shall be taken from each waste storage facility.
015	Headland Stacking Solid Manure - Sample point 015 is for solid manure land applied from approved headland stacking sites. Stacks are defined as part of the production area and therefore subject to the production area discharge limitations section of this permit. Weekly inspections of stack runoff controls are required and shall be recorded according to monitoring program.
018	Solid Manure Stacking Area - Sample point 018 is for solid waste stacking pad located at the main farm just west of the NE calf hutch area. It is a concrete pad with concrete block walls. It stores solid manure removed from the NE calf hutch area between land application or transfer to WSF 3. An engineering evaluation shall be submitted according to the schedules section of the permit.
019	Little River Satellite WSF - Sample point 019 is for the Little River liquid satellite waste storage facility. It is a concrete storage with a maximum operating level capacity of 12,661,850 gallons and was constructed in 2018. Manure and process wastewater is transferred here by truck from the main farm or heifer facility, then land applied in accordance with the approved nutrient management plan.

Manure and Process Wastewater Storage Facilities - Action Needed: For manure and process wastewater storage facilities that are to be installed, evaluated or abandoned (as indicated in the above table), see the Schedules section herein for actions required. Although this permit may require actions for installing permanent facilities, or controls, or modifications to existing facilities, interim measures shall be immediately implemented to prevent discharges of pollutants to navigable waters. Specifically, if monitoring or inspection reports indicate discharges to navigable waters from a storage facility in violation of the Production Area Discharge Limitations subsection, the permittee shall immediately install interim control measures to contain the discharges. Plans and specifications for permanent

facilities must be submitted to the Department for review and approval in accordance with Chapter 281.41, Wis. Statutes, and Chapter NR 243, Wis. Adm. Code.

1.8.2 Runoff Control System(s) - No Sampling Required

In accordance with the Production Area Discharge Limitations subsection, the permittee shall control contaminated runoff from all elements of the livestock operation to prevent a discharge of pollutants to navigable waters and to comply with surface water quality standards and groundwater standards.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, System Description (including capacity, legal location, and action needed as applicable), and Treatment Description
004	Feed Storage & Runoff Controls - Sample point (004) is for visual monitoring and inspection of the feed storage area and associated runoff control system at the main farm. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation shall be submitted according to the schedules section of the permit.
005	Main Farm Animal Lot - Sample point 005 is for visual monitoring and inspection of the main farm earthen lot. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.
007	Heifer Facility Lots - Sample point 007 is for visual monitoring and inspection of the concrete and earthen lots associated runoff control systems located at the heifer facility. Runoff is captured in a collection tank at the north end of the site and transferred via vacuum truck to WSFs 1-3 at the main farm. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation shall be submitted according to the schedules section of the permit.
013	NW Calf Hutch Area - Sample point 013 is for the calf hutch area and associated runoff control system located on the northwest corner of the production site at the main farm. Calf hutch area runoff is pumped to WSF 2. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation shall be submitted according to the schedules section of the permit.
016	Storm Water Runoff Controls - Sample point 016 (#) is for visual monitoring and inspection of all production site storm water conveyance systems. This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.
017	NE Calf Hutch Area - Sample point 017 is for the calf hutch area and similar animal housing and associated runoff control systems located on the northeast corner of the production site at the main farm. The area does not have engineered runoff controls. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation shall be submitted according to the schedules section of the permit.

Runoff Control System(s) - Action Needed: For runoff control systems that are to be installed, evaluated or abandoned (as indicated in the above table), see the Schedules section herein for actions required. Although permanent control measures may be required by this permit, interim measures shall be implemented to prevent discharges of pollutants to navigable waters. Specifically, if monitoring or inspection reports indicate discharges to

navigable waters from a runoff control facility or practice in violation of the Production Area Discharge Limitations subsection, the permittee shall immediately install interim control measures to contain the discharges. Plans and specifications for permanent runoff controls must be submitted to the Department for review and approval in accordance with Chapter 281.41, Wis. Statutes, and Chapter NR 243, Wis. Adm. Code.

1.8.3 Sampling Point 001 - WSF 1; 002- WSF 2; 009- WSF 3, and 019- Little River Satellite WSF

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limits and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

Reporting: Sampling test results shall be submitted with the Annual Report. Sampling is only required when land application has actually occurred.

Daily Log Requirements	
The permittee shall document all discharge and monitoring activities on daily log report form 3200-123A or a Department approved equivalent log sheet. Originals of the daily log reports shall be kept by the permittee as described under Record Keeping and Retention in the Standard Requirements section, and if requested, made available to the Department.	
Parameters	Units
Date of Application	Date
Field ID	Number/Name
Acres Applied	Number of Acres
Manure/Process Wastewater Source	Specify Storage Facility or Barn
Spreader Volume	Tons or Gallons
Number of Loads	Number
Soil Conditions	Dry, Wet, Frozen, Snow Covered
Temperature During Application	°F
Precipitation During Application	Describe Precipitation
Application Method	Surface Applied, Injected, Incorporated

Annual Report		
<p>The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.</p>		
Parameters	Units	Sample Type
Date of Application	Date	-
Field ID	Number/Name	-
Acres Applied	Number of Acres	-
Slope	Percent	-
Soil Test P Ave.	ppm	-
Manure Source	-	Composite
Current Crop	-	-
Crop Nitrogen Needs (per soil test)	Pounds/Acre	-
Crop P ₂ O ₅ Needs (per soil test)	Pounds/Acre	-
Manure/Process Wastewater Analysis: Available Nitrogen	Pounds/1000 Gallons	Calculated
Manure/Process Wastewater Analysis: Available P ₂ O ₅	Pounds/1000 Gallons	Calculated
Manure/Process Wastewater Application Rate	Gallons/Acre	-
Manure/Process Wastewater Applied: Nitrogen	Pounds/Acre	-
Manure/ Process Wastewater Applied: P ₂ O ₅	Pounds/Acre	-
Previous Crop	-	-
Legume Nitrogen Credit	Pounds/Acre	-
Second Year Manure Credit	Pounds/Acre	-
Additional Fertilizer: Nitrogen	Pounds/Acre	-
Additional Fertilizer: P ₂ O ₅	Pounds/Acre	-
Total Nitrogen Applied	Pounds/Acre	-
Total P ₂ O ₅ Applied	Pounds/Acre	-
Soil Conditions	Dry, Wet, Frozen, Snow Covered	-

Annual Report		
The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.		
Parameters	Units	Sample Type
Application Method	Surface Applied, Injected, Incorporated	-
Banked	Yes/No	-
Field Restrictions	Per Nutrient Management Plan	-

1.8.4 Sampling Point 003 - Misc. Solid Manure; 014- Solids from Liquid WSFs; 015- Headland Stacking Solid Manure, and 018- Solid Manure Stacking Area

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limits and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

Reporting: Sampling test results shall be submitted with the Annual Report. Sampling is only required when land application has actually occurred.

Daily Log Requirements	
The permittee shall document all discharge and monitoring activities on daily log report form 3200-123A or a Department approved equivalent log sheet. Originals of the daily log reports shall be kept by the permittee as described under Record Keeping and Retention in the Standard Requirements section, and if requested, made available to the Department.	
Parameters	Units
Date of Application	Date
Field ID	Number/Name
Acres Applied	Number of Acres
Manure/Process Wastewater Source	Specify Storage Facility or Barn
Spreader Volume	Tons or Gallons

Daily Log Requirements

The permittee shall document all discharge and monitoring activities on daily log report form 3200-123A or a Department approved equivalent log sheet. Originals of the daily log reports shall be kept by the permittee as described under Record Keeping and Retention in the Standard Requirements section, and if requested, made available to the Department.

Parameters	Units
Number of Loads	Number
Soil Conditions	Dry, Wet, Frozen, Snow Covered
Temperature During Application	°F
Precipitation During Application	Describe Precipitation
Application Method	Surface Applied, Injected, Incorporated

Annual Report

The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.

Parameters	Units	Sample Type
Date of Application	Date	-
Field ID	Number/Name	-
Acres Applied	Number of Acres	-
Slope	Percent	-
Soil Test P Ave.	ppm	-
Manure Source	-	Composite
Current Crop	-	-
Crop Nitrogen Needs (per soil test)	Pounds/Acre	-
Crop P ₂ O ₅ Needs (per soil test)	Pounds/Acre	-
Manure Analysis: Available Nitrogen	Pounds/Ton	Calculated
Manure Analysis: Available P ₂ O ₅	Pounds/Ton	Calculated
Manure Application Rate	Tons/Acre	-
Manure/Process Wastewater Applied: Nitrogen	Pounds/Acre	-
Manure/ Process Wastewater Applied: P ₂ O ₅	Pounds/Acre	-

Annual Report		
The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the “T” compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.		
Parameters	Units	Sample Type
Previous Crop	-	-
Legume Nitrogen Credit	Pounds/Acre	-
Second Year Manure Credit	Pounds/Acre	-
Additional Fertilizer: Nitrogen	Pounds/Acre	-
Additional Fertilizer: P ₂ O ₅	Pounds/Acre	-
Total Nitrogen Applied	Pounds/Acre	-
Total P ₂ O ₅ Applied	Pounds/Acre	-
Soil Conditions	Dry, Wet, Frozen, Snow Covered	-
Application Method	Surface Applied, Injected, Incorporated	-
Banked	Yes/No	-
Field Restrictions	Per Nutrient Management Plan	-

2 Groundwater Requirements

2.1 Monitoring Requirements and Limitations

This section applies to groundwater monitoring wells installed in accordance with the schedules section of the permit. groundwater monitoring system for the main farm and heifer facility production areas.

Location of Monitoring System: The vicinity of the main farm and heifer facility production areas. In accordance with a department approved groundwater monitoring plan and the schedules section of the permit, a sufficient number of groundwater monitoring wells to establish site groundwater quality and groundwater flow direction shall be installed during phase 1. The permittee shall monitor wells as specified in the table below to establish site groundwater quality and flow direction. At a minimum, two upgradient wells and three downgradient wells shall be installed. The department may require additional site monitoring wells in phase 2 based on data collected during phase 1.

Wells to be Monitored: To be identified in a department approved groundwater monitoring plan as specified in the schedules section of the permit. Wells shall be installed after department approval of plans and specifications for the groundwater monitoring system. Monitoring shall commence within 30 days of a well being installed and developed.

Background Well(s) Used to Calculate Preventive Action Limits (PALs): To be designated in a department approved groundwater monitoring plan in accordance with the Schedules section of the permit.

PALs for indicator parameters contained in the table below shall be calculated based on background groundwater quality data after 8 consecutive samples have been collected from designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent that is technically and economically feasible.

Compliance Well(s) for Enforcement Standards (ESs): To be designated in a department approved groundwater monitoring plan in accordance with the Schedules section of the permit.

Enforcement standards are to be met in groundwater located beyond any designed management zone established in accordance with section s. NR 140.22(3), or at the property boundary, whichever is closer. See the Standard Requirements section of this permit for additional conditions related to exceedances of groundwater standards.

In the event that background well concentrations exceed the PAL or ES for a given parameter, the department may consider granting exemptions to groundwater quality standards and establishing site specific alternative concentration limits (ACLs) in accordance with Chapter NR 140, Wis. Adm. Code.

Required Monitoring: Samples shall be collected from each well to be monitored. Wells shall be sampled for the parameters in the table below at the specified frequency. The department will notify the permittee if any wells need to be resampled prior the next sampling period in the event a well(s) exceeds a standard for any parameter(s).

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY*
Depth To Groundwater	feet	N/A	N/A	Monthly/Quarterly
Groundwater Elevation	feet MSL	N/A	N/A	Monthly/Quarterly
Temperature, Field	deg F	**	N/A	Monthly/Quarterly
Conductivity, Field	umhos/cm	**	N/A	Monthly/Quarterly
pH, Field	su	**	N/A	Monthly/Quarterly
Hardness, Total as CaCO ₃ Dissolved	mg/L	**	N/A	Monthly/Quarterly
Solids, Total Dissolved	mg/L	**	N/A	Monthly/Quarterly
COD, Filtered	mg/L	**	N/A	Monthly/Quarterly
Alkalinity, Total as CaCO ₃ Dissolved	mg/L	**	N/A	Monthly/Quarterly
Potassium, Dissolved	mg/L	**	N/A	Monthly/Quarterly
Carbon, Total Organic	mg/L	**	N/A	Monthly/Quarterly
Nitrogen, Organic Dissolved	mg/L	**	N/A	Monthly/Quarterly
Nitrogen, Total Kjeldahl Dissolved	mg/L	N/A	N/A	Monthly/Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Monthly/Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Monthly/Quarterly
Chloride, Dissolved	mg/L	125	250	Monthly/Quarterly
E. coli	MPN/100 ml (add unit to SWAMP)	0	0	Monthly/Quarterly

*Monthly sampling is required for the first 12 months after well installation. After the first 12 months, quarterly sampling is required.

** PALs for NR 140 Indicator Parameters have not yet been established at this site. For more information, see “Indicator Parameter – Preventative Action Limits” in the Standard Requirement section.

3 Schedules

3.1 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: Update the written emergency response plan within 30 days of permit coverage, available to the department upon request.	07/31/2019

3.2 Monitoring & Inspection Program

Use of the department's monitoring and inspection template is encouraged, but optional.

Required Action	Due Date
Proposed Monitoring and Inspection Program: Consistent with the monitoring and sampling requirements subsection, the permittee shall update and submit a proposed monitoring and inspection program within 60 days of the effective date of this permit.	08/31/2019

3.3 Annual Reports

Submit annual reports by January 31 of each year in accordance with the annual reports subsection in standard requirements.

Required Action	Due Date
Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2020
Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2021
Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2022
Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2023
Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2024
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

3.4 Nutrient Management Plan

Required Action	Due Date
Management Plan Submittal: Submit a revised nutrient management plan that reflects changes in land spreading sites, manure and process wastewater generation, and liquid manure storage to meet the conditions outlined in this permit.	08/31/2019
Management Plan Annual Update #1: To include actual cropping, tillage, and nutrient application	03/31/2020

data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	
Management Plan Annual Update #2: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2021
Management Plan Annual Update #3: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2022
Management Plan Annual Update #4: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2023
Management Plan Annual Update #5: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2024
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

3.5 Groundwater Monitoring System - Plan

Applicable to main farm and heifer facility production areas.

Required Action	Due Date
Phase 1 - Groundwater Monitoring Plan: Submit a groundwater monitoring plan consistent with the Groundwater Requirements section of the permit for the initial monitoring wells for Department review and approval. The plans shall outline the permittee's design for monitoring the production area. The submittal shall include plans and specifications for installation of Submit a Phase 1 groundwater monitoring plan, for Department review and approval, consistent with the Groundwater Requirements section of this permit. The Phase 1 plan must include installation of a sufficient number of groundwater monitoring wells to establish site groundwater quality and groundwater flow direction. The Phase 1 plan shall outline the permittee's design for monitoring the production area. The submittal shall include plans and specifications for installation of monitoring wells to be constructed in accordance with the requirements of ch. NR 141, Wis. Adm. Code.	12/31/2019
Phase 2 - Groundwater Monitoring Plan: Submit a Phase 2 groundwater monitoring plan, for Department review and approval, for installation of additional recommended production area groundwater monitoring wells to be constructed in accordance with the requirements of ch. NR 141, Wis. Adm. Code. The Phase 2 plan shall include the following: a detailed site characterization based on data collected during Phase 1, a summary of groundwater flow direction and seasonal variability, recommendations for the number and location of additional site groundwater monitoring wells, and a list of proposed sampling parameters and frequency. The department may require additional wells or sampling parameters to properly monitor the production area.	07/31/2020
Well Installation: Installation of individual wells shall be completed within 90 days following Department approval. Documentation of well construction, in accordance with ss. NR 141.065 and NR 141.23, Wis. Adm. Code, must be submitted to the Department within 60 days of installation.	

3.6 Groundwater Monitoring System - Reporting

Applicable to main farm and heifer facility production areas.

Required Action	Due Date
Quarterly reporting to the department: Quarterly reporting of groundwater monitoring data is required. Quarterly reports shall be submitted to the department within 45 days of the last sample event for that quarter via electronic groundwater monitoring forms.	
Annual Reporting to the department: An annual report that includes, the past year's tabulated groundwater monitoring data, site groundwater level contour maps and an assessment of the cause and significance of any substance detected in groundwater at a concentration above a ch. NR 140 Preventive Action Limit, shall be submitted by January 31 each year. Any updates to the groundwater monitoring workplan shall also be included in this report.	

3.7 Feed Storage runoff Controls - Engineering Evaluation

Applicable to the feed storage area runoff controls, sample point 004.

Required Action	Due Date
Written Description of Existing System: Submit an engineering evaluation that includes a written description of existing feed storage area runoff controls, including their ability to meet the conditions found in the Production Area Discharge Limitations subsection and NR 243.15, Wis. Adm. Code.	12/31/2019
Plans and Specifications: Submit plans and specifications for department review and approval to permanently correct any adverse conditions identified as part of the engineering evaluation in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	07/31/2020
Corrections and Post Construction Documentation: Complete construction of improvements to permanently correct any adverse conditions in concurrence with and approval by the department, by the specified date due. Submit post construction documentation within 60 days of completion of the project.	09/30/2021

3.8 Runoff Control System - Engineering Evaluation

Applicable to the heifer facility lots, NW calf hutch area, and NE calf hutch area. Sample points 007, 013, and 017 respectively.

Required Action	Due Date
Written Description of Existing System: Submit a written description of the existing runoff control systems and their ability to meet conditions in the Production Area Discharge Limitations and Runoff Control subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	12/31/2019
Plans and Specifications: Submit plans and specifications for department review and approval to permanently correct any adverse runoff control conditions in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	07/31/2020
Corrections and Post Construction Documentation: Complete construction of runoff controls that permanently correct any adverse runoff control conditions in concurrence with and approval by the department, by the specified date due. Submit post construction documentation within 60 days of completion of the project.	09/30/2021

3.9 Manure Storage Facility - Engineering Evaluation 1

Applicable to the solid manure stacking area, sample point 018.

Required Action	Due Date
Written Report: Submit a written report evaluating the existing manure storage facility's ability to meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	12/31/2019
Plans and Specifications: Submit plans and specifications for department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code, to permanently correct any adverse manure storage conditions.	03/31/2020
Corrections and Post Construction Documentation: Complete construction on the manure storage facility that permanently corrects any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	06/30/2021

3.10 Manure Storage Facility - Engineering Evaluation 2

Applicable to WSF 1, sample point 001.

Required Action	Due Date
Written Report: Submit a written report evaluating the existing manure storage facility's ability to meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	12/31/2020
Plans and Specifications: Submit plans and specifications for department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code, to permanently correct any adverse manure storage conditions.	06/30/2021
Corrections and Post Construction Documentation: Complete construction on the manure storage facility that permanently corrects any adverse conditions in concurrence with and approval by the department, by the specified date due. Submit post construction documentation within 60 days of completion of the project.	06/30/2022

3.11 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	01/31/2024

4 Standard Requirements

4.1 General Conditions

NR 205, Wisconsin Administrative Code: The conditions in s. NR 205.07(1), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in s. NR 205.07(1).

4.1.1 Duty to comply

The permittee shall comply with all conditions of the permit. Any permit noncompliance is a violation of the permit and is grounds for enforcement action; permit termination, revocation and reissuance or modification; or denial of a permit reissuance application. If a permittee violates any terms of the permit, the permittee is subject to the penalties established in ch. 283, Wis. Stats.

4.1.2 Permit Actions

As provided in s. 283.53, Wis. Stats., after notice and opportunity for a hearing the permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4.1.3 Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. The permit does not authorize any injury or damage to private property or any invasion of personal rights, or any infringement of federal, state or local laws or regulations.

4.1.4 Schedules

Reports of compliance or noncompliance with interim and final requirements contained in any schedule of the permit shall be submitted in writing within 14 days after the schedule date, except that progress reports shall be submitted in writing on or before each schedule date for each report. Any report of noncompliance shall include the cause of noncompliance, a description of remedial actions taken and an estimate of the effect of the noncompliance on the permittee's ability to meet the remaining schedule dates.

4.1.5 Inspection and Entry

The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:

- enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are required under the conditions of the permit;
- have access to and copy, at reasonable times, any records that are required under the conditions of the permit;
- inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under the permit; and
- sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location.

4.1.6 Transfers

A permit is not transferable to any person except after notice to the Department. In the event of a transfer of control of a permitted facility, the prospective owner or operator shall file a new permit application and shall file a stipulation of permit acceptance with the Department WPDES permit section. The Department may require modification or

revocation and reissuance of the permit to change the name of the permittee and to reflect the requirements of ch. 283, Stats.

4.1.7 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any adverse impact on the waters of the state resulting from noncompliance with the permit.

4.1.8 Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking or reissuing the permit or to determine compliance with the permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by the permittee.

4.1.9 Recording of Results-Sampling

For each manure, process wastewater or soil sample taken by the permittee, the permittee shall record the following information:

- The date, exact place, method and time of sampling or measurements,
- The individual or lab that performed the sampling or measurements,
- The date of the analysis was performed,
- The individual who performed the analysis,
- The analytical techniques or methods used
- The results of the analysis.

4.1.10 Recording of Results-Inspections

For each inspection conducted by the permittee, the permittee shall record the following information:

- The date and name of the person(s) performing the inspection,
- An inspection description, including components inspected,
- Details of what was discovered during the inspection,
- Recommendations for repair or maintenance,
- Any corrective actions taken.

4.1.11 Spill Reporting

The permittee shall notify the Department in in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations or restrictions established in this permit, or the spill or accidental release of the material that is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code, and the “Noncompliance - 24 Hour Reporting,” section of this permit.

4.1.12 Planned Changes

The permittee shall report to the Department any facility or operation expansion, production increase or process modifications which will result in new, different or increased amount of manure or process wastewater produced or handled by the permittee or which will result in new, different or increased discharges of pollutants to waters of the state. The report shall either be a new permit application, or if the new discharge will not violate the conditions of this permit, a written notice of the planned change. The report shall contain a description of the planned change, an estimate of the new, different or increased discharge of pollutants and a description of the effect of change will on current manure and process wastewater handling practices. Changes cannot be implemented prior to reporting changes to the Department. Following receipt of this report, the Department may require that the permittee submit

plans and specifications, or modify its nutrient management plan to address the planned change. Changes requiring Department action or approval may not be initiated prior to Department action or approval.

4.1.13 Submittal of Plans and Specifications

In accordance with s. NR 243.15, the permittee shall submit plans and specifications for proposed new or upgraded reviewable facilities or systems to the Department for approval prior to construction. Post construction documentation for these projects shall be submitted within 60 days of completion of the project, or as otherwise specified by the Department.

4.1.14 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the department, it shall promptly submit such facts or correct information to the department.

4.1.15 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

4.1.16 Noncompliance - 24 Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. This includes any upset which exceeds any effluent limitation in the permit, or violations of the discharge limitations listed in the permit.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at **1-800-943-0003**.

4.1.17 Reports and Submittal Certification

Signature(s) on reports required by this permit shall certify to the best of the permittee's knowledge the reports to be true, accurate and complete. All reports required by this permit shall be signed by:

- a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or
- a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code.

4.2 Livestock Operation General Requirements

4.2.1 Responsibility for Manure and Process Wastewater

The permittee is responsible for the storage, management and land application of all manure and process wastewater generated by the operation. The permittee is also responsible for any manure or process wastewater received from non-permitted operations that are accepted by the permittee for storage, management or land application.

4.2.2 Distribution of Manure and Process Wastewater

All manure and process wastewater generated by the permittee is the responsibility of the permittee and shall be stored and applied in compliance with the terms and conditions of this permit and the approved nutrient management plan, except if the manure or process wastewater is distributed to another person in accordance with s. NR 243.142 and the Department has approved the transfer of responsibility in writing.

To transfer responsibility for handling, storage and application of manure or process wastewater, a permittee shall submit a written request to the Department. At minimum the request shall indicate how the permittee will comply with all conditions identified in ch. NR 243.142(3), Wis. Adm. Code. If approved, the permittee will be responsible for the following recordkeeping and reporting:

- Update the nutrient management plan to include the estimated amount of manure and process wastewater to be transferred, and record the actual amount transferred at the time of transfer.
- Maintain records that identify the name and address of the recipient of the manure or process wastewater, quantity, and dates of transfer.
- Provide the recipient with written information regarding the nutrient content (nitrogen and phosphorus at minimum) of the manure and process wastewater.
- Submit transfer reports to the Department with the annual report.
- Records shall be maintained for at least 5 years.

Upon written approval from the Department, the permittee is not responsible for the land application, use or disposal of distributed manure or process wastewater if the manure or process wastewater is distributed in compliance with the conditions of the Department approval and s. NR 243.142.

4.2.3 Emergency Response Plans

Within 30 days of the effective date of the permit, the permittee shall develop a written emergency response plan, or update an existing plan if necessary, in accordance with s. NR 243.13(6). The plan shall be made available to the Department upon request. The emergency response plan shall be reviewed and, if appropriate or necessary, amended whenever the operation undergoes significant expansions or other changes that affect the volume or location of potential unauthorized spills or discharges. The plan shall be amended as needed to reflect changes in available equipment, available clean-up contractors or procedures to address unauthorized spills or discharges, or amended in accordance with comments provided by the department. The plan shall be retained at the production area and the permittee shall notify all employees involved in manure and process wastewater handling of the location of the plan.

4.2.4 Mortality Management

Animal carcasses may not be disposed of in a manner that results in a discharge of pollutants to surface waters, violates groundwater standards or impairs wetland functional values. Animal carcasses may not be disposed of directly into waters of the state. In addition, carcasses may not be disposed of in liquid manure or process wastewater containment, storage or treatment facilities unless the containment, storage or treatment facility is adequately designed to contain and treat carcasses and the facility has been approved by the department for that use.

The permittee shall record the date and method of carcass disposal.

[NOTE: The permittee should be aware that there are additional restrictions on the disposal of animal carcasses in ch. 95, Stats., and ATPC 3, Wis. Adm. Code. Furthermore, there may be local regulations regarding disposal of carcasses. If a carcass is disposed of off-site, the disposal may be subject to the requirements in ch. NR 502.12 or 518, Wis. Adm. Code]

4.2.5 Department Review of Nutrient Management Plans

The Department reserves the right to review the Nutrient Management Plan at any time for application rates and cover crop nutrient removal rates, as well as the timing and methods of application. If the Department determines that a landspreading site is no longer acceptable for manure and process wastewater applications, the permittee shall modify the Nutrient Management Plan to remove the site from the plan. In addition, if the Department determines application rates need to be adjusted for individual fields, the permittee shall modify the Nutrient Management Plan. All Department initiated modifications shall be completed by the permittee within 3 months of written notification from the Department.

4.2.6 Existing Manure Storage Facilities Evaluation

The following information shall be included in any required written report evaluating existing manure storage facilities:

- a narrative providing general background and operational information on the existing storage facility(s);
- the adequacy of each facility's linings to prevent exfiltration of manure contaminants to groundwater, and the facility's ability to permanently meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections;
- the proximity of bedrock and the water table to the floors of the facility(s);
- scaled drawings showing the locations of each storage unit, any surface water, water supply wells, property boundaries, and other pertinent information;
- any post construction documentation available, including the date and materials of construction;
- an assessment of the ability of the facility to meet the design requirements for manure storage in s. NR 243.15; and
- any proposed actions to address issues identified as part of the evaluation.

4.2.7 Existing Runoff Control System(s) Evaluation

The following information shall be included in any required written report evaluating existing runoff control system(s) or practice(s):

- a narrative providing general background and operational information on the existing runoff control system(s), including a full description of each system's components;
- the adequacy of the system(s) to permanently meet the conditions in the Production Area Discharge Limitations and Runoff Control subsections;
- scaled drawings showing the locations of the runoff control system, any surface water, water supply wells, property boundaries, and other pertinent information;
- any post construction documentation available, including the date and materials of construction.
- an assessment of the ability of the facility to meet the design requirements for runoff control in s. NR 243.15; and
- any proposed actions to address issues identified as part of the evaluation

4.2.8 Existing Composting Storage Facilities and Leachate Containment Evaluation

The following information shall be included in any required written report evaluating existing composting storage facility(s) and leachate containment system(s):

- a narrative providing general background and operational information on the existing storage facility(s)/system(s);
- the adequacy of each facility's linings to prevent exfiltration of manure contaminants to groundwater, and the facility's ability to permanently meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections;

- the proximity of bedrock and the water table to the floors of the facility(s);
- scaled drawings showing the locations of each storage unit, any surface water, water supply wells, property boundaries, and other pertinent information;
- any post construction documentation available, including the date and materials of construction;
- an assessment of the ability of the facility(s)/system(s) to meet the applicable design requirements in s. NR 243.15 and ch. NR 213; and
- any proposed actions to address issues identified as part of the evaluation.

4.2.9 Manure Storage Facility, Composting and Compost Leachate Containment Systems - Installation Plan Requirements

New construction of manure storage/composting facilities shall be in accordance with s. NR 243.15. Exemptions to the design criteria may be given on a case-by-case basis. Prior written approval is required. The following (minimum) information shall be included in the plans and specifications submitted for the new construction of a manure storage facility(s) or composting system(s) (three complete copies are required):

- a narrative describing the proposed facility(s)/system(s);
- a written management and site assessment;
- an operation and maintenance plan;
- an assessment of the ability of the facility(s)/system(s) to meet the applicable design requirements in s. NR 243.15;
- the adequacy of each facility's proposed linings to prevent exfiltration of manure and other contaminants to groundwater and the facility's ability to permanently meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections;
- the proximity of bedrock and the water table to the proposed elevation of each facility's floors verified through on-site soil test borings or pits;
- scaled drawings showing the design details and locations of each proposed storage unit, any surface water, water supply wells, property boundaries, and other pertinent information;
- details concerning the proposed materials of construction; and
- relevant engineering calculations.

4.2.10 Runoff Control Systems - Installation Plan Requirements

New construction of runoff control systems shall be in accordance with s. NR 243.15. Exemptions to the design criteria may be given on a case-by-case basis. Prior written approval is required. The following (minimum) information shall be included in the plans and specifications submitted for the new construction of a runoff control system(s) (three complete copies are required):

- a narrative describing the proposed system including a full description of the system's proposed components;
- a written management and site assessment;
- an operation and maintenance plan;
- an assessment of the ability of the system(s) to meet the applicable design requirements in s. NR 243.15;
- the adequacy of each proposed system to permanently meet the conditions in the Production Area Discharge Limitations and Runoff Control subsections;
- the proximity of bedrock and the water table to the proposed elevation of each system's floors verified through on-site soil test borings or pits;
- scaled drawings showing the design details and locations of each proposed system, any surface water, water supply wells, property boundaries, and other pertinent information;
- details concerning the proposed materials of construction; and
- relevant engineering calculations.

4.2.11 Record Keeping and Retention

The permittee shall keep records associated with production area and land application activities in accordance with s. NR 243.19(2). The permittee shall retain these records and copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 5 years from the date of the sample, measurement, report or application. The Department may request that this period be extended by issuing a public notice to modify the permit to extend this period. These records shall be made available to the Department upon request.

Note: A form for recording daily land application activities (Form 3200-123A) can be obtained at regional offices of the Department or the Department's Bureau of Watershed Management, 101 S. Webster St., P.O. Box 7921, Madison, Wisconsin 53707.

4.2.12 Reporting Requirements

The permittee shall submit the following reports in accordance with s. NR 243.19(3)

- **Corrective Actions:** If the permittee fails to take corrective action within 30 days of identifying a malfunction, failure, permit noncompliance or other identified problem, the permittee shall contact the Department immediately following the 30-day period and provide an explanation for its failure to take action.
- **Quarterly Reports:** The permittee shall summarize the results of inspections conducted at the production area in a written quarterly report. The permittee shall maintain the quarterly reports onsite until the quarterly report is submitted to the Department as part of the annual report.
- **Annual Reports:** The permittee shall submit written annual reports to the department by the date specified in the Schedules section of permit for all manure and other process wastewater that is generated by the permittee. These annual reports shall cover quarterly reports, annual spreading activities and other information required in s. NR 243.19(3) for the previous calendar year or cropping year, as specified in this permit.

Note: Form 3200-123 (Annual Spreading Report) can be obtained at regional offices of the department or the department's Bureau of Watershed Management, 101 S. Webster St., P.O. Box 7921, Madison, Wisconsin 53707.

4.2.13 Duty to Maintain Permit Coverage

The permittee shall submit a reissuance application in accordance with s. NR 243.12(2)(b) at least 180 days prior to the expiration date of its current WPDES permit, unless the permittee submits a letter to the Department documenting all of the following:

- That the permittee has ceased operation or is no longer defined as a large CAFO under s. NR 243.03(28).
- That the permittee has demonstrated to the Department's satisfaction that it has no remaining potential to discharge of manure or process wastewater pollutants to waters of the state that was generated while the operation was a CAFO.

4.3 Groundwater Standard Requirements

4.3.1 Application of NR 140 to Substances Discharged

This permit does not authorize the permittee to discharge any substance in a concentration which would cause an applicable groundwater standard of ch. NR 140, Wis. Adm. Code, to be exceeded. The Department may seek a response under NR 140 if the permittee's discharge causes exceedance of an applicable groundwater standard for any substance, including substances not specifically limited or monitored under this permit.

4.3.2 Groundwater Sampling

Groundwater sampling shall be performed in accordance with procedures contained in the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96).

4.3.3 Indicator Parameter - Preventive Action Limits

Preventive action limits for indicator parameters are calculated using a minimum of eight sample analysis results available from a representative background well in accordance with the procedures in s. NR 140.20, Wis. Adm. Code.

4.3.4 Groundwater Monitoring Forms

Results of the groundwater analyses shall be summarized and reported on Groundwater Monitoring Forms. This report form is to be returned to the Department no later than the date indicated on the form. A copy of the groundwater monitoring form or an electronic file of the form shall be retained by the permittee. Groundwater monitoring results shall be reported on an electronic groundwater monitoring form and certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

4.3.5 Appropriate Formulas for Groundwater

Total Nitrogen = Total Kjeldahl Nitrogen (mg/L) + [NO₂ + NO₃] Nitrogen (mg/L)

Organic Nitrogen (mg/L) = Total Kjeldahl Nitrogen (mg/L) - Ammonia Nitrogen (mg/L)

4.3.6 Reporting Depth to Groundwater

Depth to groundwater shall be reported in feet, to the nearest 0.01 foot, below the top of the well casing. A report shall be on file with the Department stating the well casing top elevation in feet above mean sea level (MSL), to the nearest 0.01 foot, for each groundwater monitoring well.

4.3.7 Groundwater Elevation

Groundwater elevations shall be calculated by subtracting the depth to groundwater measurement from the well casing top elevation and shall be reported in feet above mean sea level (MSL) to the nearest 0.01 foot.

4.3.8 Groundwater Grab Samples

Grab samples shall be taken of the groundwater only after adequate removal or purging of standing water within the well casing has been performed. For those wells which will refill with water as fast as the water can be removed by bailing or pumping, four well volumes shall be removed prior to sample collection and analysis. For those wells which will not refill with water as fast as the water can be removed by bailing or pumping, the existing volume of water inside the well casing shall be removed and samples collected after the well has refilled to at least half the original volume in the well.

4.3.9 Filtering of Groundwater Samples

All groundwater monitoring well samples shall be filtered prior to analysis, except for the portion used to collect bacteria samples or to measure pH or field specific conductance, which shall be done using an unfiltered sample. While in-field analysis is preferred for pH and field specific conductance, laboratory analysis done within two hours of sample collection is acceptable. For the portion to be filtered, it is preferred that filtering be performed in the field immediately following sample collection. However, laboratory filtering is acceptable. Filtering shall be performed through a standard 0.45 micron filter.

4.3.10 Groundwater Data Log

A data log shall be used to record the results of all field sampling and analysis events. This log shall include date of sampling event, groundwater sampler's name, well identification, depth from pipetop to water, depth from pipetop to well bottom, time of purging (start to end), volume of water purged, indication of whether the well was purged dry, time of sample withdrawal, and the following applicable field observations: pH, field conductivity, temperature, color, odor and turbidity, indication of whether field filtering was performed and time of filtering, indication of cap and lock replaced, and comments.

4.3.11 Notification of Attaining or Exceeding Groundwater Quality Standards

The permittee shall notify the Department when monitoring results indicate that a Preventive Action Limit or Enforcement Standard has been attained or exceeded. This notification may be provided in the general remarks section of the groundwater monitoring form or by letter attached to the groundwater monitoring form. Any values reported as exceeding a groundwater standard shall be confirmed as being from a representative sample and as a correct laboratory analysis result.

4.3.12 Preventive Action Limit (PAL) Exceedance

Analysis results (from facility monitoring wells) that are less than this permit's PALs indicate that facility operation is protective of groundwater quality. Substance concentrations greater than the PAL may indicate that additional technically and economically feasible actions are needed to reduce the discharge of a substance to the groundwater. In such a case, the Department may request an evaluation and response or propose a permit modification to require submittal of a groundwater evaluation report and implementation of a feasible response as specified in NR 140.24(1)(b), Wis. Adm. Code.

4.3.13 Enforcement Standard Exceedance Within the Design Management Zone

Substance concentrations greater than this permit's enforcement standard (ES) in a permittee's monitoring well located within the property boundary or within a designated design management zone may indicate that the groundwater concentration exceeds an ES outside of these boundaries. If the Department determines that an ES is being attained or exceeded within a designated design management zone or within the property boundary, whichever is the appropriate point of standards application, the Department may request an evaluation and response or propose a permit modification to require an evaluation report and appropriate response as specified in s. NR 140.27, Wis. Adm. Code.

4.3.14 Enforcement Standard Exceedance Outside the Design Management Zone

The permittee's facility operation shall not cause the concentration of a substance in groundwater to attain or exceed this permit's enforcement standard at any point of present groundwater use, at any point beyond the property boundary, or at any point beyond a design management zone established under s. NR 140.22, Wis. Adm. Code. When this condition is not met, **the permittee shall, within 120 days following notification by the Department of the attainment or exceedance of an ES beyond the compliance boundary, submit a groundwater quality evaluation and response report** as specified in NR 140.26(1)(b), Wis. Adm. Code. The Department may propose modification of this permit to require the permittee to implement additional treatment or other actions as specified in s. NR 140.26, Wis. Adm. Code.

5 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Emergency Response Plan -Develop Emergency Response Plan	July 31, 2019	21
Monitoring & Inspection Program -Proposed Monitoring and Inspection Program	August 31, 2019	21
Annual Reports -Submit Annual Report #1	January 31, 2020	21
Annual Reports -Submit Annual Report #2	January 31, 2021	21
Annual Reports -Submit Annual Report #3	January 31, 2022	21
Annual Reports -Submit Annual Report #4	January 31, 2023	21
Annual Reports -Submit Annual Report #5	January 31, 2024	21
Annual Reports -Ongoing Annual Reports	See Permit	21
Nutrient Management Plan -Management Plan Submittal	August 31, 2019	21
Nutrient Management Plan -Management Plan Annual Update #1	March 31, 2020	22
Nutrient Management Plan -Management Plan Annual Update #2	March 31, 2021	22
Nutrient Management Plan -Management Plan Annual Update #3	March 31, 2022	22
Nutrient Management Plan -Management Plan Annual Update #4	March 31, 2023	22
Nutrient Management Plan -Management Plan Annual Update #5	March 31, 2024	22
Nutrient Management Plan -Ongoing Management Plan Annual Updates	See Permit	22
Groundwater Monitoring System - Plan -Phase 1 - Groundwater Monitoring Plan	December 31, 2019	22
Groundwater Monitoring System - Plan -Phase 2 - Groundwater Monitoring Plan	July 31, 2020	22
Groundwater Monitoring System - Plan -Well Installation	See Permit	22
Groundwater Monitoring System - Reporting -Quarterly reporting to the department	See Permit	23
Groundwater Monitoring System - Reporting -Annual Reporting to the department	See Permit	23
Feed Storage runoff Controls - Engineering Evaluation -Written Description of Existing System	December 31, 2019	23
Feed Storage runoff Controls - Engineering Evaluation -Plans and Specifications	July 31, 2020	23
Feed Storage runoff Controls - Engineering Evaluation -Corrections and Post Construction Documentation	September 30, 2021	23
Runoff Control System - Engineering Evaluation -Written Description of Existing System	December 31, 2019	23

Runoff Control System - Engineering Evaluation -Plans and Specifications	July 31, 2020	23
Runoff Control System - Engineering Evaluation -Corrections and Post Construction Documentation	September 30, 2021	23
Manure Storage Facility - Engineering Evaluation 1 -Written Report	December 31, 2019	24
Manure Storage Facility - Engineering Evaluation 1 -Plans and Specifications	March 31, 2020	24
Manure Storage Facility - Engineering Evaluation 1 -Corrections and Post Construction Documentation	June 30, 2021	24
Manure Storage Facility - Engineering Evaluation 2 -Written Report	December 31, 2020	24
Manure Storage Facility - Engineering Evaluation 2 -Plans and Specifications	June 30, 2021	24
Manure Storage Facility - Engineering Evaluation 2 -Corrections and Post Construction Documentation	June 30, 2022	24
Submit Permit Reissuance Application -Reissuance Application	January 31, 2024	24
Groundwater Monitoring Forms.	no later than the date indicated on the form	31

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any plans and specifications for proposed new, modified or upgraded reviewable facilities or systems, nutrient management plan updates and annual reports, and WPDES permit reissuance or modification applications shall be submitted online through the Department's ePermitting System. This system is accessed through the Water Permit Applications web portal page located at <http://dnr.wi.gov/permits/water>. All other submittals required by this permit shall be submitted to:

Northeast Region, 2984 Shawano Avenue, Green Bay, WI 54313-6727